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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/452,162	12/01/1999	KAZUMASA OHSUMI	1185.1050/JD	9955

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STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

CHUNG, DAVID Y

ART UNIT PAPER NUMBER

2871

DATE MAILED: 07/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/452,162

Applicant(s)

OHSUMI, KAZUMASA

Examiner

David Y. Chung

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 11-17, 21-27 and 31-34 is/are rejected.
- 7) ☒ Claim(s) 8-10, 18-20 and 28-30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-7, 11-17 and 21-27 rejected under 35 U.S.C. 102(b) as being anticipated by Wagner et al. (WO 9827382).

Wagner et al. discloses a lighting unit producing a homogeneous surface light. Note in figure 1.1, the cold cathode tube 12, light guide plate 10, and prisms 17. The light guide contains three narrow incidence end faces to introduce illumination light from the light source and a large emission function face to emit the illumination light. The prisms 17 are arranged irregularly in order for the light beam to be homogeneous. The prisms 17 are arranged disconnectedly at intervals and extend across the emission function face at an angle with respect to the horizontal incidence end faces shown in figure 1.1. Each prism has a first flank face directed to one of the two horizontal incidence end faces, and a second flank face opposite the first flank face.

As to claims 2, 12 and 22, figure 1.1 shows prisms disposed at an angle between 5 degrees and 45 degrees with respect to the horizontal incidence end faces.

As to claims 3, 4, 13, 14, 23 and 24, both flank faces of the prisms are inclined so as to increase in distance from the incidence end face as shown in figures 1.2 and 1.3.

As to claims 5-7, 15-17 and 25-27, each of the prisms shown in figures 1.2 and 1.3 has a decreasing cross-section so as to be tapered toward the top portion.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 31-34 rejected under 35 U.S.C. 103(a) as being unpatentable over Wagner et al. (WO 9827382).

Although Wagner et al. specifically discloses a lighting unit for back-lit devices, it was well known and obvious that an edge illuminated system using a light guide with the light-scattering surface of Wagner et al. can easily be used with front-lit liquid crystal devices. It would have been obvious to one of ordinary skill in the art at the time of

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invention to use the lighting unit of Wagner et al. with a front-lit device in order to obtain the same homogeneous lighting in a front-lit display.

Allowable Subject Matter

3. Claims 8-10, 18-20 and 28-30 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


The following is a statement of reasons for the indication of allowable subject matter: none of the prior art taught or suggested a light guide as recited in claims 1, 11 and 21, further comprising a first foot portion connecting with the first flank face of the ridges and a second foot portion connecting with the second flank face of the ridges, wherein the second foot portion provides a stepwise difference such that the thickness of the light guide plate is greater at the second foot portion than at the first foot portion.

Response to Arguments

4. Applicant's arguments with respect to claims 1-7, 11-17, 21-27 and 31-34 have been considered but are moot in view of the new ground(s) of rejection.

C nclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Chung whose telephone number is (703) 306-0155. The examiner can normally be reached on Monday-Friday from 8:30 am to 5:00 pm.


ROBERT H. KIM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1800

David Chung
GAU-2871
06/27/03